

Friday, 1/11/2006 4:30:59 PM  
Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 25486  
 Estimate Number : 10416  
 P.O. Number : N/A  
 This Issue : 1/11/2006 S.O. No. : N/A  
 Prsht Rev. : NC  
 First Issue : N/A Type : PURCHASED PARTS  
 Previous Run : 25102  
 Written By : SEE COMMENT BELOW  
 Checked & Approved By : SEE ABOVE USER  
 Comment : Est: A 03.11.11 New Issue KJ/RF

Drawing Name : FITTING

Part Number : D31981  
 Drawing Number : D3198 REV A  
 Project Number : N/A  
 Drawing Revision : A  
 Material : N/A  
 Due Date : 1/30/2006

Qty: 100 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: 377

Email or Ship DXF file to vendor

Laser Cut flat pattern per Dwg D3198

Material release note is required

N 06.01.12 100

2.0 D31981F Fitting-Flat



Comment: Qty.: 1.0000 Each(s)/Unit Total : 100.0000 Each(s)  
 Fitting

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive &amp; Inspect For Transit Damage

Ensure material certification is attached

C 206/02/02 96

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

206-02-07

5.0 BRAKE NC NC BRAKE



Comment: NC BRAKE

1-Deburr if necessary

2-Form as per Dwg D3198

SAD 06/02/15  
 SB 06/02/16

96

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:30:59 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FITTING

Job Number: 25486

Part Number: D31981

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



(96)

06.02.20

Comment: INSPECT WORK TO CURRENT STEP

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

FC 06 02 21

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

06 02 21

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 57137

06/2/22 (96)

10.0

DC

DOCUMENT CONTROL



(96)

Comment: DOCUMENT CONTROL

Inspection Level 21

06/02/23

Job Completion



06.02.23

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

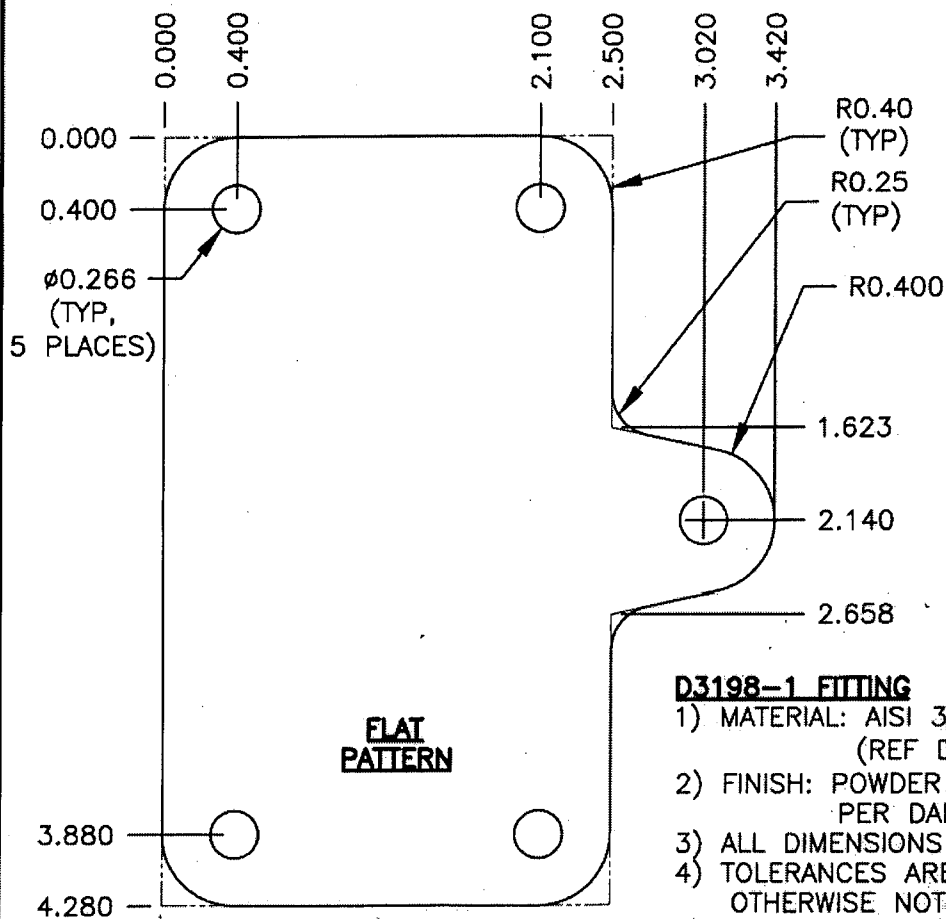
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: 12 Date: 06/02/23  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries



|                     |                       |   |                        |
|---------------------|-----------------------|---|------------------------|
| DESIGN<br><i>CP</i> | DRAWN BY<br><i>CP</i> | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br><i>#</i> | APPROVED<br><i>#</i>  | DRAWING NO.<br>D3198                              | REV. A<br>SHEET 1 OF 1 |
| DATE<br>03.09.26    |                       | TITLE<br>FITTING                                  | SCALE<br>1:1           |
| A                   | 03.09.26              | NEW ISSUE   |                        |



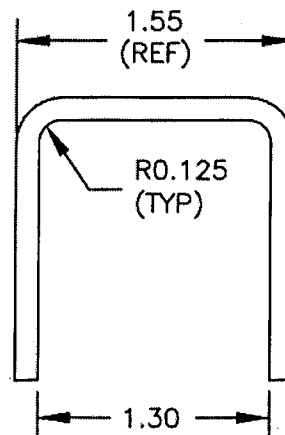
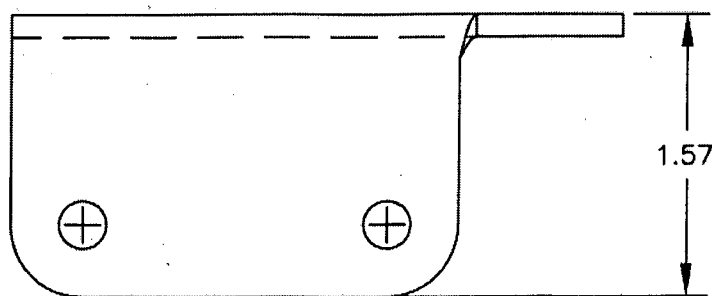
STOP! COPY  
RETURN TO  
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WITH NO NOTICE

25486

**D3198-1 FITTING**

- 1) MATERIAL: AISI 304/316 SS SHEET 0.125 THICK  
(REF DART SPEC. M304S11GA)
- 2) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6)  
PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS  
OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

RELEASED  
03.10.10 *#*



**BEND  
DETAIL**

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P41123PC002  
 Issued in accordance to Pressure Equipment Directive 97/23/EC Annex I,  
 Paragraph 4.3 by TÜV Anlagentechnik GmbH (Notified Body Identification No. 0035)  
 Inspection Certificate EN10204-3.1B

**Taiyuan Iron and Steel(Group)Co.,LTD**

NO.2 jiancaoping, Taiyuan, Shanxi, P.R.China  
 TEL: (0351)3013328 FAX: (0351)3017816  
 http://www.tisco.com.cn  
 E\_mail: tgbxg@tisco.com.cn

**INSPECTION CERTIFICATE**

|                 |                      |                  |
|-----------------|----------------------|------------------|
| MATERIAL        | AISI304 No.2B Finish |                  |
| SPECIFICATION   | ASTM A240/A480       | ASME SA240/SA480 |
| L/C NO.         |                      |                  |
| CERTIFICATE NO. | 200412110            |                  |
| DATE OF ISSUE   | 11                   |                  |

CUSTOMER  
 Marubeni-Itochu Steel Co.

CONTRACT NO.

DATA OF  
 2004/12/20

Product

Melting furnace

Inspector's stamp

Mark of the Manufacturer

COIL

E+VOD



Shanxi Taiyuan Stainless Steel Co.,ltd

| NO. | Heat No. | Coil No.     | Quantity | Dimensions    | Weight (kg) |
|-----|----------|--------------|----------|---------------|-------------|
| 1   | 4405025  | 4A11-303-12B | 1        | 11GA x 48 x C | 4358        |
| 2   | 4404509  | 4A10-356-12B | 1        | 14GA x 48 x C | 3920        |
| 3   | QHLL0164 | 4A12-141-32J | 1        | 14GA x 48 x C | 4972        |
| 4   | Y408037  | 4A12-373-42D | 1        | 12GA x 48 x C | 4382        |
| 5   | Y408037  | 4A12-374-42D | 1        | 12GA x 48 x C | 4347        |
| 6   | Y408037  | 4A12-375-42D | 1        | 12GA x 48 x C | 4257        |
| 7   | 4405608  | 4A12-341-12J | 1        | 12GA x 48 x C | 3793        |

**Chemical Composition**

| Heat No. | C     | Si    | Mn    | P     | S     | Cr     | Ni    | Cu | Al | Mo | N     |
|----------|-------|-------|-------|-------|-------|--------|-------|----|----|----|-------|
| 4405025  | 0.060 | 0.470 | 1.340 | 0.020 | 0.002 | 18.050 | 8.100 |    |    |    | 0.059 |
| 4404509  | 0.050 | 0.470 | 1.350 | 0.021 | 0.002 | 18.080 | 8.120 |    |    |    | 0.060 |
| QHLL0164 | 0.052 | 0.546 | 1.077 | 0.027 | 0.003 | 18.300 | 8.080 |    |    |    | 0.044 |
| Y408037  | 0.063 | 0.530 | 0.980 | 0.030 | 0.002 | 18.320 | 8.170 |    |    |    | 0.060 |
| Y408037  | 0.063 | 0.550 | 0.980 | 0.030 | 0.002 | 18.320 | 8.170 |    |    |    | 0.060 |
| Y408037  | 0.063 | 0.550 | 0.980 | 0.030 | 0.002 | 18.320 | 8.170 |    |    |    | 0.060 |
| 4405608  | 0.060 | 0.510 | 1.350 | 0.021 | 0.002 | 18.090 | 8.100 |    |    |    | 0.055 |

**Mechanical Properties**

| Test No.   | Tensile R <sub>m</sub><br>N/mm <sup>2</sup> | R <sub>p0.2</sub> Yield 0.2%<br>N/mm <sup>2</sup> | R <sub>p1.0</sub> Yield 0.1%<br>N/mm <sup>2</sup> | Elongation<br>A5% | Corrosion<br>Tests | Hardness |    |     |
|------------|---|---|---|-------------------|--------------------|----------|----|-----|
|            |   |   |   |                   |                    | HRB      | HV | HRC |
| 4405025-T  | 610   | 255   |   | 65                |                    | 83       |    |     |
| 4404509-T  | 655   | 265   |   | 61.5              |                    | 84       |    |     |
| QHLL0164-T | 660   | 275   |   | 58.5              |                    | 83       |    |     |
| Y408037-T  | 660   | 260   |   | 64                |                    | 83       |    |     |
| Y408037-T  | 660   | 260   |   | 64                |                    | 85       |    |     |
| Y408037-T  | 660   | 260   |   | 64                |                    | 85       |    |     |
| 4405608-T  | 665   | 265   |   | 61.5              |                    | 84       |    |     |

Surface and dimensions controlled:

Work Inspector:

